

WELDING PROCEDURE SPECIFICATION

WPS- 3503-8 **REV. NO.:** 0 **DATE:** 9/1/2004 ****APPLICABILITY****

WELDING PROCESS/ES GMAW-F and GMAW-F ASME: X AWS: X

SUPPORTING PQ 353-8 OTHER:

JOINT This WPS shall be used in conjunction with the General Welding Standards (GWS) and Welding Fabrication Procedure (WFP) sections and criteria for joint details, repairs, NDE, inspection etc.

Weld Joint Type Butt/Fillet Class: Full or Partial Penetration

See GWS 1-06 for details Preparation: Mechanical

Root Opening: Backing: With/Without

Backgrind root: Y Backing Mat.:

Bkgrd Method: GTAW Flux: Backing Retainer:

FILLER METALS: Class: E308LT-1 and

A No: 8 **SFA Class:** 5.22 **and** . **F No:** 6 **and** 0 **Size:** 1/16 1/16

Insert: N Insert Desc.: N/A Weld Metal Thickness Range:

Flux: Type: NA **Size:** 0 **AWS:** 0.187 **thru** 8.000

Filler Metal Note: ASME: 0.187 thru 2.000

BASE MATERIAL P No. 8 Gr No. 1 to: P No. 8 Gr No. 1

Spec. ASTM A-240 **Grade:** 304 **to: Spec.** ASTM A-240 **Grade:** 304

Pipe Dia Range: Groove > 4

Thickness Range: Groove: AWS: 0.187 thru 8.000 ASME: 0.187 thru 2.000

QUALIFIED POSITIONS All **Vertical Progression:** Up Preheat Min. Temp.: 50 **F GAS: Shielding:** A/CO2 \mathbf{or} Interpass Max. Temp. **Gas Composition: %** 25 **%** 0 350 **F** 75 % **Preheat Maintinance:** 50 **F** Gas Flow Rate cfh 25 **to** 50 **Backing Gas/Comp:** % PWHT: Time @ F Temp. 0 **Backing Gas Flow cfh** 0 **to** 0 **F** Trailing Gas/Comp: **%** Temp. Range: 0 **F** to

PREPARED BY Kelly Bingham DATE: 3/30/2004

Signature on file at FWO-DECS

APPROVED BY Tobin Oruch **DATE:** 9/1/2004

Signature on file at FWO-DECS

Note:For SC/SS/ML-1/ML-2 work, this WPS requires independent review.

WPS NO: 3503-8

WELDING CHARACTERISTICS:

Current: DCEP and DCEP Tungsten type: N/A Transfer Mode: Globular

Ranges: Amps 250 to 280 Pulsing Cycle: 0 to 0

Volts 24 to 28 Background Current: 0

Fuel Gas: N/A Flame: N/A Braze temp. F 0 to 0

WELDING TECHNIQUE: For cleaning, grinding, and inspection criteria refer to Volume 2, Welding

Fabrication Procedures

Technique: Manual **Cleaning Method:**

Single Pass of Multi Pass: M tringer or Weave bead (S/W): S Oscillation: N

GMAW Gun Angle °: 5 to 15 Forehand or Backhand for GMAW (F/B): FB

Maximum K/J Heat Input 50000 Travel speed/ipm: 10 - 15 Gas Cup Size:

PROCEDURE QUALIFIED FOR:

Charpy "V" Notch: N Nil-Ductil Transition Temperature: N Dynamic Tear: N

Comments:

Weld Layer	Manual Process	Filler Metals	Size	Amp 1	Range	Volt 1	Range	Trave	l ipm	Nozzel Angle	Other
1	3MAW-FC	E308LT-1	1/16	250	280	24	28	10	15	5	
2	MAW-FC		1/16	250	280	24	28	10	15	15	
3										10	
4			1/16								
5											
6											
7											
8											

REM. * Weld layers are representative only - actual number of passes and layer sequence may vary due to variations in joint design, thickness and fitup.